

CLAIMS

1. A surface-coated cutting tool comprising a base material coated with an inner layer formed on the base material and an outermost layer formed on the inner layer,
5 the inner layer being composed of a compound containing Al, at least one of elements Cr and V and at least one element selected from the group consisting of nitrogen, carbon and oxygen, and the outermost layer being composed of a carbonitride of TiSi.
2. The surface-coated cutting tool according to claim 1, wherein
10 the outermost layer has a thickness of 0.1-2 μm .
3. The surface-coated cutting tool according to claim 1, wherein
the carbonitride of TiSi has an average crystal diameter of at most 0.1 μm .
4. The surface-coated cutting tool according to claim 1, wherein
15 said inner layer is composed of a compound containing $(\text{Al}_{1-a-b}\text{Cr}_a\text{V}_b)$ (where $0 \leq a \leq 0.5$, $0 \leq b \leq 0.5$, $0 \neq a+b \leq 0.5$) and at least one of elements that are carbon, nitrogen and oxygen.
5. The surface-coated cutting tool according to claim 4, wherein
20 said $a+b$ satisfies $0.3 < a+b < 0.45$.
6. The surface-coated cutting tool according to claim 4, wherein
said a has a value satisfying $0 < a < 0.35$ and said b has a value satisfying $0 < b <$
25 0.35 .
7. The surface-coated cutting tool according to claim 4, wherein
said a and b have respective values satisfying $20 < a/b < 100$.

8. The surface-coated cutting tool according to claim 1, wherein
the inner layer contains, in atomic percent, less than 5 % of Ti.
- 5 9. The surface-coated cutting tool according to claim 1, wherein
the inner layer contains, in atomic percent, at most 30 % of Si and/or B.
- 10 10. The surface-coated cutting tool according to claim 1, wherein
the surface-coated cutting tool has a TiSiN layer between the base material and
the inner layer and/or between the inner layer and the outermost layer.
- 15 11. The surface-coated cutting tool according to claim 1, wherein
the inner layer is divided by a $\text{TiSiC}_x\text{N}_{1-x}$ (where $0 \leq x \leq 0.5$) layer.
12. The surface-coated cutting tool according to claim 11, wherein
said $\text{TiSiC}_x\text{N}_{1-x}$ is TiSiN.
13. The surface-coated cutting tool according to claim 1, wherein
the base material is coated with the layers that have a total thickness of 0.5-8 μm .